

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANTS : **GERS-BARLAG et al.**  
SERIAL NO. : Not yet assigned  
FILED : 21 February 2002  
FOR : EMULSIFIER-FREE FINELY DISPERSE SYSTEMS OF THE  
OIL-IN-WATER AND WATER-IN-OIL TYPE  
ART UNIT : **1619**  
EXAMINER : **Michael G. Hartley**

**21 February 2002**

Hon. Commissioner of Patents  
Washington, D.C. 20231

**PRELIMINARY AMENDMENT**

SIR:

Prior to examination, please amend the above-identified application as follows:

**IN THE CLAIMS:**

**Please cancel claims 1-13 and add new claims 14-30 (see next page):**

14. A Pickering emulsion, said Pickering emulsion being a finely dispersed water-in-oil or oil-in-water system, said Pickering emulsion comprising:
  - a) an oil phase comprising at least one wax and/or at least one oil thickener;
  - b) an aqueous phase;
  - c) microfine particles, said microfine particles being metal oxides:
    - i) having an average particle size of less than 200 nm;
    - ii) being dispersible both in water and in oil; and
    - iii) having both hydrophilic and lipophilic properties resulting in amphiphilic character;
  - d) at least one film former; and
  - e) at most 0.5% by weight of one or more emulsifiers.
15. Pickering emulsion according to Claim 14, are emulsifier-free.
16. Pickering emulsion according to Claim 14, the content of the particles used is between 0.1% by weight and 30% by weight, based on the total weight of the preparations.
17. Pickering emulsion according to Claim 14, wherein the particle diameter of the particles used is between 5 nm and 100 nm.
18. Pickering emulsion according to Claim 14, the particles have been surface-treated to repel water, where the amphiphilic character of the particles is formed or retained.
19. W/O Pickering emulsion according to Claim 14, the total amount of one or more film formers in the emulsion is chosen to be less than 10% by weight based on the total weight of the emulsion.

20. W/O Pickering emulsion according to claim 19, wherein the total amount of one or more film formers in the emulsion is between 1.0 and 7.0% by weight, based on the total weight of the emulsion.

21. O/W Pickering emulsion according to Claim 14, the total amount of one or more film formers is chosen to be less than 20.0% by weight based on the total weight of the emulsion.

22. O/W Pickering emulsion according to claim 21, wherein the total amount of one or more film formers in the emulsion is between 2.0 and 15.0% by weight, based on the total weight of the emulsion.

23. Pickering emulsion according to Claim 14, wherein the film former(s) is/are selected from the group of polyvinylpyrrolidone (PVP) polymers.

24. Pickering emulsion according to Claim 23, wherein the film former(s) is/are selected from the group of polyvinylpyrrolidone copolymers.

25. Pickering emulsion according to Claim 14, wherein the film former(s) is/are selected from the group consisting of PVP hexadecene copolymer, PVP eicosene copolymer, sodium polystyrenesulphonate and polyisobutene.

26. A method of providing skin care, said method comprising applying to skin an emulsion according to any one of claims 14-25.

27. A method for stabilizing a cosmetic or dermatological Pickering emulsion comprising of:

- a) an oil phase comprising at least one wax and/or at least one oil thickener;
- b) an aqueous phase;
- c) microfine particles, said microfine particles being metal oxides:
  - i) having an average particle size of less than 200 nm;
  - ii) being dispersible both in water and in oil; and
  - iii) having both hydrophilic and lipophilic properties resulting in amphiphilic character; and
- d) at most 0.5% by weight of one or more emulsifiers,

which consists of adding at least one film former to said Pickering emulsion.

28. The method of claim 27 wherein said at least one film former is selected from the group of polyvinylpyrrolidone (PVP) polymers.

29. The method of claim 28 wherein said at least one film former is selected from the group of polyvinylpyrrolidone copolymers.

30. The method of claim 29 wherein said at least one film former is selected from the group consisting of PVP hexadecene copolymer, PVP eicosene copolymer, sodium polystyrenesulphonate and polyisobutene.

**REMARKS**

Claims 1-13 have been cancelled and claims 14-30 have been added. Claims 14-26 are now pending. Although claims 14-30 are broader in scope than the claims allowed in 09/396,560, they still represent a narrower embodiment of originally filed claims 1-13. As such, it is believed that no new matter has been added.

Claims 14-26 correspond to the claims allowed in parent application 09/396,560 with the

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exception of the coating limitation (see attached sheet for comparison of claims), i.e. the scope of the claims has been expanded so that the amphiphilic metal oxide microfine particles are not limited by the means by which they are made to be amphiphilic.

Claims 27-30 correspond to claim 13, the subject matter of which was cancelled during the prosecution of the parent application.

If the only issue preventing allowability of the claims is the lack of a terminal disclaimer to overcome a obviousness-type double patenting rejection, the examiner is encouraged to telephone the undersigned (A faxed copy of the appropriate terminal disclaimers can be provided within 48 hours or less - Given the cost (\$110 per terminal disclaimer), the applicants prefer not to file the terminal disclaimers until there is an indication of allowable subject matter.) Early and favorable action is earnestly solicited.

Respectfully submitted,  
NORRIS MC LAUGHLIN & MARCUS, P.A.

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HCL:vif

Attachment: Comparison of pending claim 14 with claim 14 from 09/396,560

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**CERTIFICATE OF MAILING**

I hereby certify that the foregoing Preliminary Amendment is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Hon. Assistant Commissioner for Patents, Washington, D.C. 20231, on the date indicated below:

Date: 21 February 2002

By Howard C. Lee  
Howard C. Lee

## COMPARISON OF PENDING CLAIM 14 AND CLAIM 14 OF 09/396,560

### 14. (PENDING CLAIM SHOWING DIFFERENCES FROM CLAIM 14 OF '560)

A Pickering emulsion, said Pickering emulsion being a finely dispersed water-in-oil or oil-in-water system, said Pickering emulsion comprising:

- a) an oil phase comprising at least one wax and/or at least one oil thickener;
- b) an aqueous phase;
- c) microfine particles, said microfine particles **being metal oxides**:
  - i) having an average particle size of less than 200 nm;
  - ii) being dispersible both in water and in oil; **and**
  - iii) having both hydrophilic and lipophilic properties resulting in amphiphilic character; [and
  - iv) **being selected from the group consisting of metal oxides, which**  
**are coated on the surface thereof with:**  
**(A) a dimethylpolysiloxane and/or silica gel; and**  
**(B) aluminium hydroxide and/or alumina and/or silicon dioxide;]**
- d) at least one film former; and
- e) at most 0.5% by weight of one or more emulsifiers.

### 14. (FROM '560)

A Pickering emulsion, said Pickering emulsion being a finely dispersed water-in-oil or oil-in-water system, said Pickering emulsion comprising:

- a) an oil phase comprising at least one wax and/or at least one oil thickener;
- b) an aqueous phase;
- c) microfine particles, said microfine particles **being metal oxides**:
  - i) having an average particle size of less than 200 nm;
  - ii) being dispersible both in water and in oil; **and**
  - iii) having both hydrophilic and lipophilic properties resulting in amphiphilic character; [and
  - iv) **being selected from the group consisting of metal oxides, which**  
**are coated on the surface thereof with:**  
**(A) a dimethylpolysiloxane and/or silica gel; and**  
**(B) aluminium hydroxide and/or alumina and/or silicon dioxide;]**
- d) at least one film former; and
- e) at most 0.5% by weight of one or more emulsifiers.